**IT Applications Unit 3  
Chp 3: Networked Information Systems**

**Their topologies**

**Star Network**

1. Describe the nature of this network  
   All the components in the star network are connected to a hub. The hub takes signals coming from each computer on the network and sends them simultaneously to all of the other components connected to the hub.
2. List the advantages and disadvantages of this network.  
   **Disadvantages**  
   -Devices have to wait for a gap in the network traffic to send a message  
   -When many devices are connected to the hub it may take a long time for a gap to appear.  
   -If hub is broken all devices are out of communication  
   -Costly to install  
   **Advantages**  
   -Each device has its own set of wires, so if there is a problem only that device on that wire will stop working  
   -Devices can be connected and disconnected without any difficulties

**Bus Network**

1. Describe the nature of this network  
   Wires run from each device to a central cable. All computers and other devices such as printers or scanners on the bus network are connected to the central cable. At the end of each cable there is a special connection (terminator) that absorbs the signals and prevents them from bouncing back up the cable
2. List the advantages and disadvantages of this network  
   **Disadvantage**-If a bus network has a problem with the central cable or terminators, each device on the network is unable to communicate  
   **Advantage**-Computers and other devices can be attached and detached at any point on the bus without disturbing the rest of the network.  
   -If any computers fail the rest of the network is able to continue operating
3. Why are these networks rarely installed nowadays?  
   They are rarely installed these days at they can only operate at 10 megabits per second due to the limitations of coaxial cable and the connectors used.

**Ring Network**

1. Describe the nature of this network  
   Computers are connected in a ring and messages travel around the ring to other computers
2. What are the disadvantages of this network?  
   -Can only operate at 10Mbps  
   -Computers have to wait for a gap in the network traffic

**Tree Network**

1. Describe the nature of this network  
   Uses characteristics of both bus and star topologies. Consists of groups of star configured workstations that are connected to a bus backbone cable

**Intranets**

1. Describe the nature of an intranet  
   Is an internal, secured environment that has a similar look and feel to the internet but operates as a local area network.
2. List the advantages of using the intranets.  
   -Access to information in a controlled manner  
   -Communication within the organisation (eg; news, notices, maps of building locations, guidelines, policies and telephone numbers can be published on the intranet)  
   -Messages that log hardware and software problems with technical support personnel  
   -Contacts of who to approach for various problems or issues  
   -Bi-directional mechanisms; (eg; online forms and document reviews)  
   -Training through the publication of online user guides and computer-based training programs  
   -Can reduce cost within an organisation  
   -Take less time to find data